

REMARKS

Initially, Applicants respectfully acknowledge that the Examiner has objected to claims 2-5 and has indicated that dependent claims 2-5 would be allowable if rewritten in independent form including all the limitations of the base claims and any intervening claims.

Claims 1-3, 5 and 19-22 are pending in the application. Claims 4 and 6-18 have been canceled, and claims 21-22 have been submitted for consideration.

Reconsideration of the rejections and allowance of the pending application in view of the foregoing amendment and following remarks are respectfully requested.

In the Office Action of July 19, 2004, claims 1, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Patent No. 6,688,126 B1, (hereinafter "Kim") in view of Dasher, U.S. Patent No. 5,502,983 (hereinafter "Dasher"). This rejection is respectfully traversed.

Independent claim 1 has been amended to more clearly define a structural feature of the invention and to more clearly distinguish over the applied prior art references. No new matter is introduced by the present amendment. In this regard the Examiner's attention is directed to, inter alia, Fig. 5 of Applicants' application.

It is a disclosed object of the present invention to provide a built-in refrigerator provided at a sink and configured to effectively discharge heat from a condenser and a compressor.

To achieve the above-noted object, the built-in refrigerator of the present invention, as recited in amended claim 1, includes, inter alia, a cabinet provided in a sink and having a component chamber at a rear bottom of the cabinet, a dust guard provided between a front bottom of the cabinet and a floor, a compressor provided in the component chamber, and a condenser provided under a bottom surface of the cabinet. A ventilation passage communicating between the component chamber and a bottom of the cabinet, and an outside area of the dust guard, the ventilation passage discharging heat generated from the condenser and the compressor to the outside area, and a cooling fan is provided in the component chamber, the cooling fan cooling the condenser and the compressor. The condenser includes a refrigerant tube that passes refrigerant therethrough, and a cooling fin having a first end connected to the refrigerant tube, a second end exposed to the ventilation passage, and a long thin plate extending parallel to an airflow direction in the ventilation passage.

Applicants respectfully submit that the cited references relied upon in the rejection under 35U.S.C. 103(a) do not disclose such a combination of features.

Although the primary reference Kim discloses the structure of a ventilation passage, there is no teaching or suggestion of the structure of a cooling fin that improves heat transfer rate between a condenser and an air-flow passing through the ventilation passage.

The secondary reference to Dasher is directed to a condenser coil with an extended surface which provides effective heat transfer and air flow characteristics. However Dasher does not disclose a cooling fin comprising a long thin plate extending parallel to an airflow direction in the ventilation passage.

In contrast, as explained above, the disclosed condenser 40 of the present invention includes a refrigerant tube 40b that passes refrigerant therethrough, and a cooling fin 41 having a first end connected to the refrigerant tube 40b, a second end exposed to the ventilation passage 60, and a long thin plate extending parallel to an airflow direction in the ventilation passage. At least this feature in the claimed combination, is not disclosed in the applied references.

Therefore, even assuming, arguendo, that the teachings of Kim and Dasher can be properly combined, the asserted combination of Kim and Dasher would not result in the invention as recited in claim 1.

This feature, that the cooling fin is arranged parallel to an airflow direction in the ventilation passage, increases the area for transferring heat between the condenser and the

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air-flow, whereby the heat transfer rate between the condenser and the air-flow is augmented. Thus, the performance of the built-in type refrigerator is improved.

Thus, the rejection of independent claim 1, and of dependent claims 19 and 20 under 35 U.S.C. 103(a) is improper for at least these reasons, and withdrawal of such rejection is respectfully requested.

Newly added claims 21-22 recite further limitations of the refrigerant tube. No new matter is believed to be introduced by these claims.

Claims 33 and 5 have been amended to more clearly disclose the features of the present invention.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based on prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to be attached thereto.

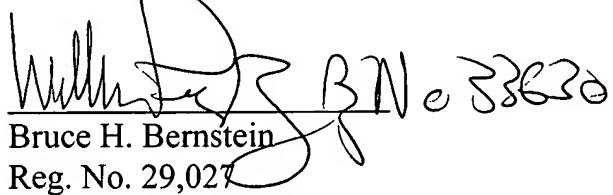
Independent claim 1 is now in condition for allowance in view of the amendments and the above-noted remarks. Dependent claims 2, 3, 5 and 19-22 are also submitted to be in condition for allowance in view of their dependence from the allowable base claims and also at least based upon their recitations of additional features of the present invention. It is respectfully requested, therefore, that the rejections under 35 U.S.C.103(a) be withdrawn and that an early indication of the allowance thereof be given.

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Based on the above, it is respectfully submitted that this application is now in condition for allowance, and a Notice of Allowance is respectfully requested.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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